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**Group-4**

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**Task-1:** Which testing algorithm you will choose whether conventional or TDD for calculator and a smartphone products and why? 2 pointers are sufficient.

**Calculator Product:**

**Conventional Testing**

**1. Simplicity and Stability:**

Calculators have a limited and well-defined set of functions (e.g., addition, subtraction, multiplication, division). Conventional testing can thoroughly cover all functionalities and edge cases with predetermined test cases. The functionality is typically stable, requiring less frequent updates.

**2. Predictable Outcomes:**

The mathematical operations of a calculator yield predictable and deterministic results, making it easier to design test cases in advance without the need for the iterative development and testing cycle that TDD requires.

**Smartphone Product:**

**Test-Driven Development (TDD)**

**1. Complexity and Integration:**

Smartphones have a highly complex and dynamic set of features, integrating various hardware components and software functionalities (e.g., touch screen, camera, network connectivity, apps). TDD helps manage this complexity by ensuring each component is tested as it is developed, facilitating early detection of integration issues.

**2. Frequent Updates and Agile Development:**

Smartphone software is often developed in an agile environment with frequent updates and feature additions. TDD supports this by encouraging a continuous integration and testing approach, ensuring new features and updates do not break existing functionalities and maintaining high code quality throughout the development lifecycle.